

# NCER 2009 Program Themes

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**Ecosystem Restoration at the Watershed Scale** – the primary focus of NCER 09 is to share lessons-learned from the conduct of large-scale ecosystem restoration programs both in the U.S. and internationally. Technical sessions convened under this general theme will present information to convey the unique complexities associated with conducting restoration at the watershed scale.

- Addressing Climate Change at the Watershed Scale
- Building and Maintaining Partnerships
- Policy Needs and Challenges
- Restoration Program Management
- Adaptive Management
- Restoration Economics and Decision Making
- Establishing Restoration Priorities
- Watershed Scale Toolbox (Models, Process, etc.)
- Opportunities and Constraints associated with Existing Land Use and Ownership

**New Planning Approaches to Achieve Ecosystem Restoration** – project planning approaches that address the uncertainty associated with implementing large-scale ecosystem restoration programs is essential to their overall success. This general theme will explore various tools and techniques planners can use to address the challenges associated with implementation of large-scale ecosystem restoration.

- Quantification of Benefits
- Evaluating Alternative Future Scenarios for Long-Term Planning
- Ecological Modeling and other Tools
- Incorporating Climate and other Future Changes
- Stakeholder Involvement: At What Stage and How?
- Paleoecology in Restoration
- Contaminants
- Ecosystem Restoration across International Borders
- Addressing Uncertainties and Risk

**Science and Engineering Integration** – fundamental to achieving restoration success is gaining knowledge about the functionality of the ecosystem to be restored and incorporating this learning through an adaptive management framework. Sessions convened under this general theme will discuss how scientific and engineering knowledge can be used to: (1) define restoration success; (2) establish desired endpoints; (3) produce engineering design guidance; (4) measure ecological response; (5) make predictions about anticipated management actions; (6) link scientific information to management actions; (7) adjust implementation of restoration plan in order to achieve program goals and objectives.

- Adaptive Management
- Endangered Species
- Coastal and Nearshore Habitat Restoration
- Riverine Restoration
- Upland Restoration
- Fish and Wildlife Habitat
- Contaminants
- Climate Change Impacts
- Resilience of Restored Habitat and Ecosystems

**Linking Monitoring Results with Management Decision-making** – an emerging issue confronting each of the major ecosystem restoration programs is the linkage of ecological response monitoring to future decision-making. Presentations under this theme will explore how different restoration programs are addressing this issue and finding ways to include new learning into decision-making, both to adjust current management actions and also influence future projects.

- Adaptive Management; Making the Process Simple and Effective
- Partnerships-cooperation
- Restoration Economics and Decision Making
- Communicating Monitoring Results
- Evaluating Success in the Face of Climate Change
- Cost-effective Monitoring Protocols

**Urban Ecosystem Restoration** – ecosystem restoration projects located within an urban setting are dramatically on the increase both in the U.S. and internationally. A series of case studies will present some of the challenges confronted by project managers of urban ecosystem restoration projects. Because of intense constraints from land use and issues of multiple stressors, opportunities for ecosystem restoration are severely limited in highly urbanized areas. Thus project goals and criteria for success may need to be modified compared to the restoration of other natural systems.

- Human Dimensions
- The Interface Between the Urban and Rural
- Adaptive Management
- Partnership-cooperation in a More Complex Policy Context
- Addressing the Carbon Footprint in Urban Ecosystem Restoration
- Establishing Restoration Goals in Highly Urbanized Ecosystem

**Ecosystem Goods and Services** – often times ecosystems provide their users with goods and services that are not valued in the traditional sense (i.e., no traditional market value). The concept of non-marketed ecosystem goods and services are a way to effectively make the link between ecosystem functions and human welfare. Ecosystem services arise from—and depend on—the broader sets of ecological components, processes, and functions but are different: they are the aspects of the ecosystem that society uses, consumes, or enjoys to experience those benefits. This theme will focus on how large scale ecosystem restoration programs are addressing and measuring ecosystem goods and service within the context of large-scale ecosystem restoration.

- Environmental Benefits
- Human Dimensions
- Capturing and Comparing Restoration Economics During Decision-making
- Climate Change Considerations
- Partnerships-cooperation: Added Value and Force Multipliers
- Sustainable Design and Integration of Ecosystem Restoration